Abstract SAT0543 – Table 1. Odds ratio and Forest plot analysis

Risk factors	Knees with sonographic crystals (Total: 73 knees) r	Knees without sonographic crystals (Total: 33 knees)	Odds ratio	95% CI	p value (significance)
Male Gender	15	3	2.6	0.7 to 9.6	0.16
Female Gender	58	30	0.4	0.1 to 1.4	0.16
Dyslipidemia	38	16	1.2	0.5 to 2.6	0.73
Chronic medical illness as Diabetes mellitus and hypertension	20	10	0.9	0.4 to 2.1	0.76
Clinically detected knee effusion	7	2	1.6	0.3 to 8.4	0.55
Limitation in ROM	36	10	2.2	0.9 to 5.4	0.07
Bursitis by sonography	35	6	4.1	1.5 to 11.2	**0.01***
Effusion by sonography	47	12	3.2	1.3 to 7.4	**0.01***
Total (fixed effects)	430/1022	156/462	1.9	1.4 to 2.6	0.23
Total (random effects)	430/1022	156/462	1.9	1.3 to 2.8	

53.5 years ± 8.3 SD, disease duration 42.5 months ± 49.5 SD. Crystal deposits were sono-graphically diagnosed in 73 knees with normal serum uric acid values (68.9%> MSU in 31.1%, CPPD in 63.2%, a picture of mixed deposits in 5.7%). Plain radiography revealed chondrocalcinosis in 3 patients only. Regression analysis models and Forest Plot test revealed a 4.1 fold incidence of crystal deposition in patients with sonographic bursitis than those without (OR=4.13, CI=1.5–11.2, p=0.01) and a 3.2 fold incidence of crystal deposition in patients with sonographic effusion than those without (OR=3.16, CI=1.34–7.44, p=0.01).

Conclusions: The study concluded a number of clinical as well as radiographic associates that might be considered as predictors of silent CDD in patients with knee OA as diagnosed by ultrasonography, the most commonly reported clinical associates were bursitis and effusion.

References:
[1] Naredo E, Cabero F, Palop MJ, Collado P, Cruz A, Crespo M. Ultrasono-graphic findings in knee osteoarthritis: A comparative study with clinical and radiographic assessment. Osteoarthr Cartil. 2005; 13(7):568–74.
[2] Doherty M, Jones A, Cawston T. Osteoarthritis. In: Oxford Textbook of Rheumatology. Isenberg D. Lanyon P.Muir K. Doherty S. eds. 3rd ed. Oxford University Press. 2004; 1091- 1118.

SAT0544   **SUBGROUPS IN RADIOGRAPHIC FEATURES IN PATIENTS WITH HIP OSTEOARTHRITIS: RESULTS OF THE AMS-OA COHORT**

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Background: Radiographic features are important in diagnosing hip osteoarthritis (OA)[1,2]. In daily practice, only the anterior-posterior view is visualized but not the false profile view. Since we assessed radiographic features in both types of radiographic hip images in the AMS-OA cohort, we were able to examine the differences in radiographic features in two regions of the hip (superior-lateral and central-axial region).

Objectives: (i) To describe the presence of radiographic features in patients with hip OA; and (ii) to determine whether radiographic features differ between the superior-lateral and central-axial region of the hip.

Methods: Data from 97 patients with bilateral hip pain and a Kellgren and Lawrence score of ≥1 of the Amsterdam Osteoarthritis (AMS-OA) cohort of patients with knee and/or hip OA were used. Standard radiographic images were examined of patients in an erect position, both with an anterior posterior view and with a false profile view, which is an oblique lateral view of the hip. Radiographic images were scored by an experienced radiologist (DR) and an independent researcher (ME). Consensus between two raters was achieved for each score. Four radiographic features were scored: presence of joint space narrowing, osteophytes, sclerosis and cysts. All joint features were scored separately for the superior-lateral and the central-axial region of the hip. A Fisher's exact test was performed for testing the significance of the differences between the two regions of the hip.

Results: Table 1 shows the frequencies of radiographic features (joint space narrowing, osteophytes, sclerosis and cysts) in the superior-lateral and the central-axial region of the left and right hip joint of patients with hip OA. Significant differences between the two regions were found for osteophytes, sclerosis and cysts with the highest frequency of these features in the superior-lateral region of the hip.

Conclusions: In our cohort we found as expected, that joint space narrowing of the hips was the most frequent feature (>80% in both the superior- lateral and central-axial region). Moreover, osteophytes, sclerosis and cysts were more frequently present in the superior-lateral region. Our findings indicate that hip OA may exist of two subgroups with differences in radiographic features (i.e., superior-lateral and central-axial). Future research should confirm these results

Radiographic feature	Superior Lateral part				Central Axial part				Fisher's exact test	
	Left		Right		Left		Right		Left	Right
	N	%	N	%	N	%	N	%	P-value	P-value
JSN	77	79.4	78	80.4	81	84.4	83	85.6	NS	NS
Osteophytes	68	70.1	65	67.0	49	51.0	45	46.9	0.014*	0.003*
Sclerosis	43	44.8	44	45.8	15	15.6	11	11.5	0.023*	0.021*
Cysts	28	29.2	30	31.3	3	3.1	2	2.1	<0.001**	<0.001**

TABLE 1: presence of radiographic features in patients with bilateral hip pain. (*p<0.05) (**p<0.001)

and focus on possible associations with biomechanical and physical function variables.

References:
[1] Altman RD, Gold GE. Atlas of individual radiographic features in osteoarthritis, revised. Osteoarthritis and Cartilage (2007); 15, A1-A56.
[2] Krishanu B, Gupta MD, Duryea J, Weissman BN. Radiographic evaluation of osteoarthritis. Radiol Clin N Am 42 (2004) 11–41.

SAT0545   **PREDICTIVE FACTORS FOR RESPONSE TO ULTRASOUND-GUIDED INTRA-ARTICULAR GLUCOCORTICOIDS IN KNEE OSTEOARTHRITIS**

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Objectives: To investigate predictive factors for good outcome of ultrasound intra-articular glucocorticoids in knee osteoarthritis (OA).

Methods: We conducted a prospective monocenter cohort study including 116 patients with knee OA, after failure to standard treatments, with pain >4 (numerical rating scale NRS 0–10). Patients received an ultrasound-guided injection of 40 mg triamcinolone acetonide in their most painful knee. We exhaustively collected demographic and clinical data at inclusion, as well as lab, radiographs and ultrasound parameters of the included knees. WOMAC score was calculated at inclusion and after 4 weeks. Responders were defined as patients with at least 40% improvement of their WOMAC score. Univariate analysis was performed in order to select possible predictive factors, and stepwise multiple logistic regression analyses were conducted to identify predictors of response.

Results: Among the 116 patients, 101 were females. Median age was 64 years (40–85) and mean duration of the disease was 14.1±14,8 years. Mean BMI was 29.9±3.8 Kg/m^2. Mean NRS of pain was 8.4±1.2 and mean WOMAC was 73.3±11,8 at inclusion. 70.0% of the knees were grade 3 or 4 of Kellgren-Lawrence. 98% of knees expressed ultrasound synovial effusion and/or hypertrophy at inclusion. After 4 weeks, 61.2% of patients were responders. Regression analysis showed that patients with a BMI <30 Kg/m^2 (OR=0.38, 95% CI 0.16–0.89) and an ESR <20 mm (OR=0.27, 95% CI 0.08–0.90) were more likely to respond to ultrasound-guided glucocorticoids injection. Having both predictive factors of good response increases the response rate to 73.5%, whereas having no predictive factor decreases the response rate to 25.0%.

Conclusions: Our study is the largest study evaluating predictive factors of response for intra-articular glucocorticoids injections in knee OA. Also, it is the first study of predictive factors for ultrasound-guided injections. Patients with high BMIs and high ESR seem less likely to respond to intra-articular injections.